



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/453,586	12/03/1999	YASUHIKO TAKEMURA	0756-2061	2842

31780 7590 11/05/2002

ERIC ROBINSON
PMB 955
21010 SOUTHBANK ST.
POTOMAC FALLS, VA 20165

EXAMINER

NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
----------	--------------

2673

19

DATE MAILED: 11/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

HC

Office Action Summary

Application No.

09/453,586

Applicant(s)

TAKEMURA, YASUHIKO

Examiner

Jimmy H. Nguyen

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 08/419,956.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13, 15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 03/18/2002 and 05/13/2002 and respectively entered as papers No. 13 and 15 are considered by the examiner.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-68 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of U.S. Patent No. 6,023,308, hereinafter PAT308, in view of Hamada et al. (USPN: 5,194,974, cited in IDS entered as paper No. 2), hereinafter Hamada.

As per claims above, although the conflicting claims are not identical, they are not patentably distinct from each other because PAT308 and the application are claiming common subject matter, as follows:

Pending Application

A LCD semiconductor device

A substrate

Patent

An active matrix LCD device

A substrate

Art Unit: 2673

First and second top-gate or bottom-gate	First and second top-gate or bottom-gate
TFTs	TFTs
First and second signal lines	First and second signal lines
A voltage supply line	A voltage supply line
A pixel electrode	A pixel electrode
A driving circuit	A driving circuit

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent except for an operation method comprising a step of applying a voltage from the voltage supply line to the pixel electrode for a period during one frame wherein the period is determined in accordance with a desired tone of a display, as recited in independent claims 1-24, and a step of applying one or more pulses from the voltage supply line to the pixel electrode during one frame wherein a number of pulses applied to the pixel electrode during one frame is determined in accordance with a desired tone of a display, as recited in independent claims 25-48. However, Hamada discloses a related apparatus and an associate method, wherein as noting in figure 4 and at column 7, lines 37-46 and column 8, lines 21-45, the common line (F) (corresponding to the claimed voltage supply line) is supplied by an a.c. voltage (V_c') having a rectangular waveform of $\pm 7.5V$, and a static voltage is supplied to pixel electrode for a desired period. Accordingly, one skilled in the art would recognize that Hamada discloses the step of applying a voltage from the voltage supply line to the pixel electrode for a period during one frame wherein the period is determined in accordance with a desired tone of a display, and the step of applying one or more pulses from the voltage supply line to the pixel electrode during one frame wherein a number of pulses applied to the pixel electrode during one frame is

Art Unit: 2673

determined in accordance with a desired tone of a display. It would have been obvious to a person of ordinary skill in the art to utilize Hamada's teachings above in the methods of the PAT308 because this would maintain a display of clear and non-flickering constant halftone images as any other tone images on the screen (col. 4, lines 35-37 and lines 57-62). Therefore, it would have been obvious to one skilled in the art to combine Hamada et al. with PAT308 to obtain the claimed invention as specified in claims above.

Response to Arguments

4. Applicants' arguments filed 08/13/2002, have been fully considered but they are not persuasive because as follows:

In response to applicants' argument filed "Hamada fails to disclose the period of applying the voltage is determined in accordance with a desired tone", page 6, lines 10-12, as mentioned above, Hamada discloses that the a.c. voltage is applied to drive the liquid crystal of the selected pixel of a half tone image for a longer period of time as long as the TFT2 remains on (col. 7, lines 37-46, col. 8, lines 29-45). Further, as noting in fig. 4, the first TFT1 is turned on and off by a gate voltage on the gate signal line (Y1). When the TFT1 is turned on, a source voltage according to a desired tone image on the source signal line (X1) is charged in the capacitor (C1), thereby the TFT1 and capacitor (C1) functioning as a sample holding circuit (col. 8, lines 29-30). The TFT2 is turned on when a voltage charged in the capacitor (C1) is sufficiently higher than a threshold voltage of the TFT2. As a result, the a.c. voltage is applied to the selected pixel cell for a period in according to the half tone image voltage applied to the source signal line (X1). Accordingly, one skilled in the art would recognize that Hamada discloses the step of applying a voltage from the voltage supply line to the pixel electrode for a period during one frame wherein

Art Unit: 2673

the period is determined in accordance with a desired tone of a display, and the step of applying one or more pulses from the voltage supply line to the pixel electrode during one frame wherein a number of pulses applied to the pixel electrode during one frame is determined in accordance with a desired tone of a display, as claimed.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as mentioned above, Hamada teaches that the motivation for doing so would maintain a display of clear and non-flickering constant halftone images as any other tone images on the screen (col. 4, lines 35-37 and lines 57-62).

For the above reasons, it is believed that the rejections should be sustained.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2673

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231


or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

JHN
October 28, 2002


Amare Mengistu
Primary Examiner